

Claims

[c1] A computer program product, comprising:
a computer storage medium and a computer program code mechanism
embedded in the computer storage medium for causing a switch to control
redundant signaling operations, the computer program code mechanism
comprising:
a first computer code device configured to identify a first switch for which a
second switch is to act as a backup;
a second computer code device configured to receive periodic messages
indicating that the first switch is functioning properly;
a third computer code device configured to receive a message indicating that
the first switch is experiencing difficulty; and
a fourth computer code device controlling the second switch configured to
emulate the address of the first switch and route calls on behalf of the first
switch when the first switch is experiencing difficulty, wherein the first and
second switches are remotely located and independently addressable.

[c2] The computer program product as claimed in claim 1, wherein the third
computer code device configured to receive a message indicating that the first
switch is experiencing difficulty comprises a fifth computer code device
configured to receive a message indicating that the first switch is experiencing
congestion.

[c3] The computer program product as claimed in claim 1, wherein the third
computer code device configured to receive a message indicating that the first
switch is experiencing difficulty comprises a fifth computer code device
configured to receive a message indicating that the first switch is experiencing
an error.

[c4] The computer program product as claimed in claim 1, wherein the third
computer code device configured to receive a message indicating that the first
switch is experiencing difficulty comprises a fifth computer code device
configured to receive a message intended for the first switch.

[c5] The computer program product as claimed in claim 1, further comprising a fifth

computer code device configured to receive a message from the first switch when the first switch is no longer experiencing the difficulty.

- [c6] The computer program product as claimed in claim 1, wherein the third computer code device comprises a fifth computer code device configured to receive SS7 messages.
- [c7] The computer program product as claimed in claim 6, wherein the fifth computer code device comprises a sixth computer code device configured to receive SS7 messages using point codes as addresses.
- [c8] The computer program product as claimed in claim 1, wherein the first and second switches control first and second sets of voice gateways, respectively, when the first and second switches are not experiencing difficulty.
- [c9] The computer program product as claimed in claim 8, further comprising a fifth computer code device configured to enable the second switch to control both of the first and second sets of voice gateways when the first switch is experiencing difficulty.
- [c10] A switch for use in a packet voice environment, the switch comprising:
 - a memory to identify another switch for which the switch is to act as a backup;
 - a first receiver configured to receive periodic messages indicating that (1) the another switch is functioning properly and (2) the first switch is experiencing difficulty; and
 - a controller for controlling the switch to route calls on behalf of the another switch by emulating the address of the another switch when the another switch is experiencing difficulty, wherein the switch and the another switch are remotely located and independently addressable.
- [c11] The switch as claimed in claim 10, wherein the receiver is configured to receive a message indicating that the first switch is experiencing congestion.
- [c12] The switch as claimed in claim 10, wherein the receiver is configured to receive a message indicating that the first switch is experiencing an error.
- [c13] The switch as claimed in claim 10, wherein the receiver is configured to receive

a message intended for the first switch.

- [c14] The switch as claimed in claim 10, wherein the receiver further comprises a decoder for receiving a message from the another first switch when the another switch is no longer experiencing the difficulty.
- [c15] The switch as claimed in claim 10, wherein the receiver comprises an SS7 message receiver.
- [c16] The switch as claimed in claim 6, wherein the receiver comprises an SS7 message receiver using point codes.
- [c17] The switch as claimed in claim 10, wherein the another switch and the switch control first and second sets of voice gateways, respectively, when the first and second switches are not experiencing difficulty.
- [c18] The switch as claimed in claim 17, further comprising a controller configured to enable the switch to control both of the first and second sets of voice gateways when the another switch is experiencing difficulty.